Title: METHOD TO ENHANCE AGROBACTERIUM-MEDIATED TRANSFORMATION OF PLANTS

IN THE CLAIMS

Please amend the claims as follows:

1-56. (Canceled).

- 57. (Currently Amended) A method for the stable transformation of monocot plant tissue or cells, comprising:
 - selecting a concentration an amount of cysteine of at least 100 mg/L a sulfhydryla) containing agent which is effective in solid co-cultivation media to enhance the stable transformation of monocot plant tissue or cells with Agrobacterium relative to the stable transformation of monocot plant tissue or cells with Agrobacterium in the absence of the agent, wherein if the sulfhydryl-containing agent is cysteineeysteine is present at a concentration of at least 100 mg/L;
 - co-culturing on solid media monocot plant tissue or cells and an Agrobacterium b) containing a recombinant DNA, wherein the solid media comprises the selected concentration amount of the one or more sulfhydryl containing agents;
 - identifying stably transformed monocot plant tissue or cells; and c)
 - regenerating a transformed monocot plant from the stably transformed monocot d) plant tissue or cells.
- 58 (Original) The method of claim 57 or 62 wherein the efficiency of stable transformation in the presence of the agent is at least 10% greater than the efficiency of transformation in the absence of the agent.
- 59 (Previously Presented) The method of claim 57 or 62 wherein the efficiency of stable transformation in the presence of the agent is at least 0.5% greater than the efficiency of transformation in the absence of the agent,

- (Previously Presented) The method of claim 57 or 62 wherein the transformed tissue or cells are identified by selection.
- (Original) The method of claim 60 wherein the transformed tissue or cells are selected for in hygromycin.
- (Currently Amended) A method for the stable transformation of <u>monocot</u> plant tissue or cells, comprising:
 - a) selecting an amount of cysteine effective in solid co-cultivation media to enhance the stable transformation of plant tissue or cells with Agrobacterium relative to the stable transformation of plant tissue or cells with Agrobacterium in the absence of cysteine, wherein cysteine is present at a concentration of at least 100 mg/L;
 - b) co-culturing on solid media monocot plant tissue or cells and an Agrobacterium containing a recombinant DNA, wherein the solid media comprises the amount of cysteine at a concentration of at least 100 mg/L, and wherein the co-culturing on the solid media is effective to enhance the stable transformation of the monocot plant tissue or cells with Agrobacterium relative to the stable transformation of monocot plant tissue or cells with Agrobacterium co-cultured on solid media without cysteine;
 - [[c)]] b) identifying stably transformed monocot plant tissue or cells; and
 - [[d]] c) regenerating a transformed plant from the stably transformed monocot plant tissue or cells.
- (Original) The method of claim 57 or 62 wherein the stable transformation is enhanced by at least 5-fold.
- 64. (Original) The method of claim 57 or 62 wherein the stable transformation is enhanced by at least 10%.

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65-67. (Canceled).

- (Currently Amended) The method of claim 57 or 62 wherein the media further comprises
 agent is glutathione, sodium thiosulfate, or dithiothreitol.
- 69-70. (Canceled).
- (Original) The method of claim 57 or 62 wherein the recombinant DNA comprises a selectable marker.
- (Original) The method of claim 57 or 62 wherein the recombinant DNA comprises a detectable marker.
- (Original) The method of claim 57 or 62 wherein the recombinant DNA comprises a
 promoter operably linked to an open reading frame of interest.
- 74. (Original) The method of claim 68 wherein the glutathione is present at 0.4 g/L or 0.001 to 1 mM, sodium thiosulfate is present at 0.1 to 20 mM, or dithiothreitol is present at 1 g/L or 0.75 to 2 mM.
- (Original) The method of claim 57 or 62 wherein the plant tissue or cells are maize, wheat, sugarcane or rice tissue or cells.
- (Previously Presented) The method of claim 57 or 62 wherein the plant tissue or cells are maize, wheat or rice tissue or cells.
- 77. (Canceled)
- (Currently Amended) The method of claim <u>57 or 62</u> [[or 67]] wherein cysteine is present at a concentration of at least 400 mg/L.

- (New) A method for the stable transformation of monocot plant tissue or cells, comprising:
 - a) selecting a composition comprising cysteine which is present in an amount effective in solid co-cultivation media to enhance the stable transformation of monocot plant tissue or cells with Agrobacterium relative to the stable transformation of monocot plant tissue or cells with Agrobacterium in the absence of cysteine, wherein the cysteine is at a concentration of at least 100 mg/L;
 - co-culturing on solid media comprising the composition monocot plant tissue or cells and an Agrobacterium containing a recombinant DNA;
 - identifying stably transformed monocot plant tissue or cells; and
 - regenerating a transformed monocot plant from the stably transformed monocot plant tissue or cells.
- (New) A method for the stable transformation of monocot plant tissue or cells, comprising:
 - a) co-culturing monocot plant tissue or cells and an Agrobacterium containing a recombinant DNA on solid media comprising a composition comprising cysteine at a concentration of at least 100 mg/L, wherein the co-culturing on the solid media with the composition enhances the stable transformation of the monocot plant tissue or cells with Agrobacterium relative to co-culturing on solid media in the absence of the cysteine;
 - b) identifying stably transformed monocot plant tissue or cells; and
 - regenerating a transformed plant from the stably transformed monocot plant tissue or cells.
- (New) The method of claim 79 or 80 wherein the plant tissue or cells are maize, wheat, sugarcane or rice tissue or cells.